

Topic: Relationships of numbers**Question:** Which fraction is greater?

$$\frac{4}{5} \text{ and } \frac{7}{10}$$

Answer choices:

A $\frac{4}{5}$

B $\frac{7}{10}$

C The fractions are equivalent

D Cannot be determined



Solution: A

To determine which fraction is greater, we want to find a common denominator for the two fractions. Since the least common multiple of their denominators (5 and 10) is 10, we'll change $\frac{4}{5}$ to an equivalent fraction that has a denominator of 10.

$$\frac{4}{5}$$

$$\frac{4}{5} \left(\frac{2}{2} \right)$$

$$\frac{8}{10}$$

Now that the denominators are equal, we can compare the fractions directly.

$$\frac{8}{10} \text{ and } \frac{7}{10}$$

Because the numerator of $\frac{8}{10}$ is greater than the numerator of $\frac{7}{10}$ (and their denominators are equal), we see that $\frac{8}{10}$ is greater than $\frac{7}{10}$, which means that the equivalent fraction $\frac{4}{5}$ is greater than $\frac{7}{10}$.



Topic: Relationships of numbers**Question:** Which number is less than the other?

$$\frac{1}{2} \text{ and } \frac{3}{4}$$

Answer choices:

- A $\frac{1}{2}$
- B $\frac{3}{4}$
- C The numbers are equivalent
- D Cannot be determined



Solution: A

In order to compare $\frac{1}{2}$ to $\frac{3}{4}$, we need to find a common denominator for the two fractions. The least common multiple of their denominators (2 and 4) is 4, so we'll change $\frac{1}{2}$ to a denominator of 4.

$$\frac{1}{2}$$

$$\frac{1}{2} \left(\frac{2}{2} \right)$$

$$\frac{2}{4}$$

Now that the denominators are equal, we can compare the fractions directly.

$$\frac{2}{4} \text{ and } \frac{3}{4}$$

Because the numerator of $\frac{2}{4}$ is less than the numerator of $\frac{3}{4}$ (and their denominators are equal), we see that $\frac{2}{4}$ is less than $\frac{3}{4}$, which means that the equivalent fraction $\frac{1}{2}$ is less than $\frac{3}{4}$.



Topic: Relationships of numbers**Question:** Pick an equivalent fraction.

$$4\frac{1}{8}$$

Answer choices:

A $\frac{32}{8}$

B $12\frac{1}{8}$

C $4\frac{2}{16}$

D $4\frac{1}{4}$



Solution: C

Equivalent fractions, when you reduce them to their lowest terms, will always be equal to one another. For example, $\frac{2}{16}$ can be reduced as

$$\frac{2}{16}$$

$$\frac{2 \div 2}{16 \div 2}$$

$$\frac{1}{8}$$

Which means that we can rewrite answer choice C as

$$4\frac{2}{16}$$

$$4\frac{1}{8}$$

